



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,867	07/22/2003	Jari Hulkkonen	59643-00282	6401
32294	7590	05/17/2005	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P.			WIMER, MICHAEL C	
14TH FLOOR			ART UNIT	
8000 TOWERS CRESCENT			PAPER NUMBER	
TYSONS CORNER, VA 22182			2828	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/623,867

Applicant(s)

HULKKONEN ET AL.

Examiner

Michael C. Wimer

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

In paragraph "[0042]", line 12, (found on page 8), it appears that "1208" should be --108--.

Also in paragraph "[0042]", there is confusion with the description of the pattern shown in Fig. 3 and what antennas are responsible for the specific boundary sectors (i.e., 300, 302 and 304) and the gain representations (i.e., arcs 306-312) illustrated. For example, the sentence in lines 10-13, "[T]he arrow 304...the outer sector.", defines the outer sector or main coverage of the first antenna (108), and the sentence in lines 15-18, "[T]he radius...second antenna.", defines both sectors 300 and 302, where each represents the limit of reliable coverage of the first and second antennas, respectively. It appears that such conditions should be reversed from what is explained in said paragraph, and thus, applicant should verify the relationship of the coverage area/sector and respective antennas.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2828

3. Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martek (6268828).

Regarding Claims 1,9-12 and 24-34 Martek shows an antenna arrangement, for example in Fig. 9, comprising at least two antennas for providing coverage to a plurality of mobile units (e.g., cellular phones within a cell system network) and having at least two different antennas 2x-1,2x-2 and 2x-3,2x-4, provided with a plurality of frequencies within the band of operation, providing two separate phase centers for each antenna, where a different beam-tilt is provided (see col. 16, lines 41-50), the adjusting means 530a (col. 16, lines 51-62) provides for dynamically adjusting transmission properties of the lower antenna. It would have been obvious to the skilled artisan that the lower antenna provides for distribution of users within the area covered by the beam therefrom.

The use of allocating means, as claimed, is provided by allocating at least one user equipment to the group of users in the area noted above (the beam with the most beam tilt). A skilled artisan would have found it obvious that allocating means comprises the network disclosed by Martek, where an individual cellular phone is allocated a frequency pair, has an identification within the network and thus utilizes the particular beam (either one having varying degrees of beam-tilt). Regarding Claims 2 and 4, the antennas, frequency pairs/groups and groups of users are associated with particular beams and frequencies. A skilled artisan would have found it obvious that these conditions obtain in order for the network to handle all calls associated with the radio units. Regarding Claims 3,5-8

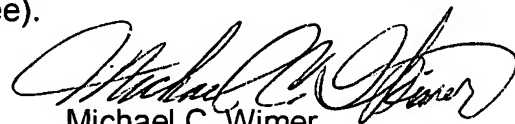
Art Unit: 2828

and 13-23, a skilled artisan would have found it obvious that the users are associated with respective layers, corresponding to the beams, and their frequency pairs associated with their groups of users within respective cells.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun O. Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Wimer  
Primary Examiner  
Art Unit 2828

MCW  
5/2/2005